



stormwater Connections

from raindrop to river



happyrivers.org

Published by the City of Eugene Stormwater Management Program

Spring 2013



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Pesticides: a health challenge for rivers, kids and pets

Pesticides are specialized chemicals designed to kill or damage insects, plants, molds and rodents. If pesticides only came in contact with their intended target, we might have fewer reasons to be concerned. But sprays, granules and powders can leave their traces in many places. They are easily tracked into homes on shoes and paws or transported with the help of water down driveways and into storm drains, making their way to our rivers.

Kids need protection from pesticides

Children are at a greater risk when exposed to pesticides for a number of reasons. Children's internal organs are still developing and maturing. Their enzymatic, metabolic, and immune systems may provide less natural protection than those of an adult. There are also "critical periods" in human development when exposure to a toxin can permanently alter the way an individual's biological system operates.

Children may be exposed more to certain pesticides because often they eat different foods than adults. For instance, children typically consume larger quantities of milk, applesauce, and fruit juice per pound of body weight than do adults. Children are also more likely to come in contact with pesticide residues because they play on the floor or on the lawn where pesticides are applied, or put objects in their mouths.

Adverse effects of pesticide exposure range from mild symptoms of dizziness and nausea to serious, long-term neurological, developmental and reproductive disorders. Americans use more than a billion pounds of pesticides each year to combat pests on farm crops, in homes, businesses, schools, parks, hospitals, and other public places.



Many common garden chemicals are dangerous to children and pets, and may cause problems long after application.

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Planning a Car Wash? Choose our stormwater-friendly kit for your fund-raising event

Borrow our free, fish-friendly car wash kits to keep soap suds out of storm drains and rivers. To learn more, check out our online video at happyrivers.org. To reserve a kit, call 541-682-4929 in Eugene or 541-726-3694 in Springfield.



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Pets are more vulnerable to toxins because they are smaller, closer to the ground, have faster metabolisms and often lick paws that carry residue.

If children become sick and you suspect exposure to pesticides as a cause, it is important that the treating physician knows the type of chemical used. Acute signs and symptoms are similar in several classes of pesticides but the treatment methods can be very different.

Pets are affected as well

Pets are more vulnerable to toxins in our homes and yards as they are closer to the ground that may harbor chemical residues. They are always barefoot and licking themselves. Pets also have smaller lungs and faster metabolisms than humans, so

they absorb toxins faster. Several commonly-used pesticide products have been linked to diseases in dogs and cats.

A study published in the Journal of the National Cancer Institute linked 2,4D—found in many weed and feed (combination fertilizer and herbicide) products—to a four-fold increase in malignant lymphoma in dogs. Slug baits containing metaldehyde are toxic to dogs if ingested. Fly bait and insecticides containing methmyl or carbofuran can cause seizures and respiratory distress in both dogs and cats.

What to do?

Although they may provide a short term solution, remember that pesticides often don't solve pest problems. Solving a pest problem requires identifying the factors that allow the pest to thrive and then changing the conditions so that the pest is no longer successful. Get rid of pesky insects naturally or seek out the least-toxic products first. To learn more about your options, download the natural gardening guide available at www.oregonmetro.gov 💧

Spring Cleaning Reminder

If disposing of odds and ends of materials in your garage is one of your spring cleaning activities, here's a simple solution from Lane County. Hazardous waste—pesticides, fertilizers, poisons, acids, batteries and pool chemicals to name a few—may be dropped off at Lane County's Household Hazardous Waste Collection Center in Glenwood. Residents can drop off waste free of charge by appointment only, on Thursday mornings or on two Saturdays each month. Call 541-682-3111 during business hours Monday through Friday to schedule an appointment.

Learn more at lanecounty.org/Departments/PW/WMD/HazWaste

Leftover latex paint can be dropped off at some retail paint and hardware stores. To find a list and more ideas for using leftover paint, visit www.paintcare.org 💧

Don't skip the fine print

Use any product you choose with care to protect yourself and the environment

Pesticide labels contain information essential for effective, safe, and legal use. Some of this fine print is vital to the proper use of the product, your safety, and the safety of those around you. This includes:

- Chemical names and ingredient statement
- Precautionary statements
- Environmental, physical and chemical hazards
- Signal words and symbols
- First aid information
- Directions for use

Commonly disregarded instructions

(things you may have thought of trying but really shouldn't do)

- If a little is good, more is better.
- If the label says it works great in the driveway, it should be dynamite in the garden!
- If it says to use it every two weeks, it should work even better every week!
- There's just a little bit left over...I'll pour it down the drain.
- Gloves?! Gloves are for wimps!

Personal protective equipment

Minimum good practice

- Pants
- Long-sleeved shirt
- Gloves
- Shoes or boots

May be required for full protection

- Goggles / Face shield
- Hat
- Respirator
- Protective outerwear



Learn more about pesticides from these resources:

National Pesticide Information Center: npic.orst.edu/

EPA: www.epa.gov/pesticides/factsheets/

American Academy of Pediatrics, December 2012 report on the impact of pesticides

Pest management without toxics: Growsmartgrowsafe.org

Pest control squad protects garden naturally

Balance is essential to growing and managing a healthy yard and garden. Yet, many of the garden products developed over the last 60 years contain toxic ingredients that have worked against nature rather than working with it —altering a garden’s natural balance. The good news is that there are lots of practices that are safe for people, pets and wildlife. One of those includes using beneficial bugs —nature’s pest control.

Insects, spiders and other crawling or flying creatures are vital to healthy gardens. Most perform important jobs like pollinating flowers, recycling nutrients and eating pests. In fact, less than one percent of garden insects actually damage plants. Not sure where to begin with bug identification? One easy-to-use source is the book “Good Bug, Bad Bug,” available as a free download online from Rodale Press. 💧



Did you know that 99% of the bugs in your yard are beneficial? Most bugs prey on other bugs (including your pests), help with organic decay, and fill an important spot in the ecosystem. Here are some of the superstar scavengers that help your garden to grow.

Above: antlion, centipede, ground beetle. Below: lacewing larva, mantis, parasitic wasp.



Photo credits: mantis by Clemson University, Bugwood.org; wasp by David Coppert, Michigan State University, Bugwood.org; all others by Joseph Berger, Bugwood.org.

Urban animals and clean water

For many years, City staff members have been conducting research and providing information to citizens about ways to keep bacteria from urban waterways, including the popular Canines for Clean Water program. The bacteria found in city waterways can come from many sources including wildlife, waterfowl, humans, rodents and pets. With the recent passage of the Urban Animal Keeping standards, City staff is reaching out to property owners that currently own or plan to raise farm animals. “Backyard farmers” play a crucial role in keeping the city’s waterways clean. If you are planning to keep small livestock in your yard, you should think ahead to help protect our waterways from harmful bacteria.



Disposal of animal waste in an open waterway or the stormwater system is strictly prohibited.

Managing manure properly and not allowing the waste to accumulate is important for human health, animal health, pest control and the environment. Never put manure in on-street yard debris bins.

- Composting raw manure is an option for managing certain backyard animal waste. This should be done with caution however, since manures contain pathogens that can make people sick. Human, cat, pig or dog feces should not be used in compost. Rabbit and chicken manures can be used with hot compost methods that kill pathogens.
- Compost piles must be confined within an enclosed container or bin and covered. To protect open waterways, do not locate waste containers on slopes or within restricted waterway setback areas. Containers are to be located at least five feet from all property lines.
- Flies, rodents, possums and raccoons can be attracted to the grain and food scraps fed to animals. It is important to keep all grain in a water-proof, pest-proof container, and make sure that urban animals eat all food on a daily basis.

For more information on the Urban Animal Keeping standards, contact land use staff via email to landuseinfo@ci.eugene.or.us or phone at 541-682-6883. 💧



Successful urban agriculture practices include plans to manage solid waste and keep harmful bacteria from entering local waterways.

Sustainable Landscape Program provides practical “green” tips

Five years ago, several local agencies, native plant specialists and landscapers met with Ross Penhallegon, Extension Agent for Lane County, to shape the Sustainable Landscape Program. The first effort was a two-day teach-the-teachers seminar of interested Master Gardeners.

Since then, a dedicated cadre of Master Gardeners have taught the nine lectures, which include Water Efficiently, Mulch and Compost, Gardening for Wildlife, Stream Side Gardening, Yard Pest Control, Right Plant/Right Place, Sustainable Lawn Care, Storm Water Strategies, and Edible Landscaping. The two-day seminar includes demonstrations and walks in local parks to reinforce the lectures.

For anyone wanting to be more thoughtful about using earth-friendly yard care, there is plenty to learn. Healthy landscape practices include improving soil biology, reducing erosion, reducing pesticide and fertilizer use, and improving the quality and quantity of groundwater. Other outcomes include lowering water, power and waste bills through more efficient use of resources and reducing the amount of organic material in the landfill.

Upon completion of the course, participants conduct a self-evaluation of their yards, followed by an on-site evaluation within a few months to determine what improvements have been implemented. Participants with an evaluation score of over 40 points earn a placard to display in their yard showing that their yard has been certified by the OSU Extension Service as a Sustainable Landscape.

OSU Extension Service in Lane County has received a grant from EWEB to promote this program.

Sustainable landscape training dates

April 24-25

June 26-27

October 23-24

All trainings are at the EWEB North building, 500 E 4th Avenue. The cost is \$25 per person.

If you have questions, call 541-344-0265. To register, go to: <http://extension.oregonstate.edu/lane/gardens> 💧

Bring Your Bag Eugene!

Did you know we use over 6.7 million single-use plastic bags in Eugene each year? The City of Eugene is joining cities around the world by banning single-use plastic carryout bags at retail locations starting May 1.

Single-use plastic carryout bags may offer short-term convenience, but they have long-term costs in terms of litter and impact on wildlife and the environment. Locally, the switch from single-use bags to reusable bags will decrease litter in our woods, streams, and natural areas, while also reducing the amount of garbage we produce. The ban also will lower the number of plastic bags that annually clog the City's stormwater system, thereby reducing localized flooding and lowering maintenance costs.

As the new law takes effect, the City is ramping up a Bring Your Bag campaign. The campaign is designed to provide information to shoppers and retailers as well as connecting residents with resources to get free or reduced price reusable bags.



Tips for reducing single-use bags and reusing what you do have:

Remember your bag

- ▶ Always start your shopping list with “Bring Bags”
- ▶ Keep a collapsible bag in your purse, backpack, or briefcase
- ▶ Keep bags in your vehicle

Re-use plastic bags

- ▶ Dealing with pet waste: There will still be many plastic bags in circulation. You can continue to use bread bags, produce, bulk, or cereal bags.
- ▶ Lining a garbage can: Line your garbage can with newspaper and rinse it out periodically. Or buy some lightweight plastic bags and reuse them, dumping only the trash into your outdoor garbage can and re-using the liner.

Keep reusable bags clean

- ▶ Cloth bags should be washed in a washing machine using laundry detergent and dried in the dryer or air-dried monthly.
- ▶ Plastic-lined reusable bags should be wiped using hot water and soap and air-dried.
- ▶ Check that both cloth and plastic-lined reusable bags are completely dry before storing them.

To find out more about the Bring Your Bag campaign, please visit eugene-or.gov/plasticbags 💧



Commercial Compost Program Diverts Tons of Local Food Waste

More than 100 Eugene businesses Love Food Not Waste (LFNW) by participating in Eugene's commercial compost program. Now one and a half years old, the program has kept nearly 1,500 tons of commercial food waste out of the landfill and transformed this material into nutrient-rich compost. Participating businesses include restaurants, grocery stores, schools, office buildings and religious organizations. The program is made possible by participation from Eugene's garbage haulers (who pick up the food waste) and commercial compost facilities (who accept the food waste and turn it into compost).

Once the compost is finished, it can be applied to garden beds as a soil amendment. Compost is an important part of the garden because it absorbs water and reserves it for plants. This puts less of a burden on our stormwater system by decreasing irrigation needs. Be on the lookout for Love Food Not Waste compost at participating retailers this summer.

Does your favorite business participate in the LFNW program? Check eugene-or.gov/lovefood to view an updated participant list and look for the LFNW logo on the window of participating retailers. 💧



Clearly labeled containers make collection of compostables easy (above). Sanipac's commercial compost truck makes the rounds to local businesses (below).



Informational posters similar to the one above provide guidelines for employees.

Join us for our annual Public Works Day Open House



Come take a behind-the-scenes look at the many ways public works serves our community. Learn more about parks and natural areas, the Eugene airport, wastewater, stormwater, engineering and maintenance. Special guests include the Eugene Police and Fire Departments.

**Thursday, May 16 from 8:30 a.m. to 3 p.m.
1820 Roosevelt Boulevard**

- ❑ Climb aboard and explore the big trucks
- ❑ Take part in hands-on activities geared for kids of all ages
- ❑ Meet stormwater ambassador Lily the frog
- ❑ Watch staff demonstrate the use of specialized equipment
- ❑ Learn about the history of Public Works in Eugene

And more...

Convenient bus, van, and bicycle parking is available. LTD also has a bus stop right across from the yard's main entrance.

For more information, visit eugene-or.gov/pwd or call 541-682-4800.



Climbing into trucks and getting close to critters are just two highlights of Public Works Day.

wetlands & waterways

Ferndale Park Prospers

Individuals and groups who would like to volunteer or adopt a local park should contact Eugene Park Stewards. Visit eugene-or.gov/eps or call 541-682-4800 for more information about the program.

Ferndale Park, once a farmhouse and hazelnut orchard, is getting many more visitors these days. Its users include dog walkers, families, youth on bikes, and those getting some exercise on the new path which follows the recently constructed stormwater swale.

When the idea to build a swale in this undeveloped park was put forward to community members, Friends of Ferndale Park, a multi-generational adoption group, was very engaged in the planning of the swale. As a result of their input to city staff working on the project, adjustments were made to the swale plus a path around the swale was added.

Many years of stewardship provided by the Friends have been invaluable. They've cleared out blackberries and other debris making the park safer and more attractive. This winter, they put in native plants along a section of the swale. To learn more information about Ferndale Park or to volunteer, contact Lorna Baldwin, West Region Volunteer Coordinator at 541-682-4845 or lorna.j.baldwin@ci.eugene.or.us. 💧



Friends of Ferndale Park meet with City staff during the design phase of the project (above). Friends helped plant the stormwater swale with native plants (below).



Juvenile Chinook salmon have already been found in this backwater habitat during winter months.

Wildlife Thriving at Delta Ponds

Have you seen the Heron Slough along the West Bank bike path? Completed as part of the larger Delta Ponds project, it is nearly one-quarter mile long. The slough provides important backwater habitat for native fish, including juvenile Chinook salmon. At moderate and high flows, water from the river flows through the slough from Heron Pond. This side channel also acts to reduce flooding downstream by giving the river a place to spill out into the floodplain.

This little stretch of the Willamette is always melodic with the sound of song birds. Birds are attracted to the remnant forest of mature cottonwoods and ash, as well as the hundreds of newly planted riparian trees and shrubs. Eugene Park Stewards is looking for individuals and groups to adopt sections of this one-quarter mile slough and provide stewardship and monitoring. See sidebar at top left for more details. 💧



*Before at left,
and after with
vegetated swale*



*Before at left,
and after with
vegetated swale*



During periods of rain, stormwater from these locations carried pollutants like oil, gas, and metals to Amazon Creek. After compacted soil and asphalt were removed, stormwater swales filter pollutants before they reach Amazon Creek.

Trout Friendly Landscapes

Improving Business Properties and Water Quality

The Long Tom Watershed Council (LTWC), a partner with the City of Eugene, recently launched its Trout Friendly Landscapes program to assist local businesses, commercial property owners and landscape maintenance professionals improve landscape practices. By making a few stormwater-friendly changes, property owners can help improve water quality in Amazon Creek, Fern Ridge and the Long Tom and Willamette Rivers. By pledging to 1) reduce or eliminate pesticide use 2) replace turf with native grasses and climate appropriate plants 3) improve irrigation efficiency and 4) direct downspouts and stormwater runoff to swales and rain gardens, businesses and commercial property owners can display their commitment to water quality.

Mountain Rose Herbs took the Trout Friendly Landscapes pledge at their facility on Stewart Rd., which is right next to Amazon Creek. Their landscaping is maintained without the use of pesticides or other chemicals that can wash away during rain, or if the property is overwatered, to our local creeks and rivers. Additionally, they have a swale which captures stormwater allowing it to filter into the soil, reducing runoff that can carry pollutants from rooftops, landscapes and paved surfaces to our local waterways.

Recently, LTWC partnered with Davis Commercial Properties to retrofit a commercial property to treat stormwater before it gets to Amazon Creek. The property owner and the Council agreed on a landscape plan that would add native plants, plant stormwater swales and remove asphalt from a parking lot. The South Willamette Center on 27th and Willamette is home to local businesses including In Shape Athletic Club and Agate Alley Laboratory.

Businesses can learn more and participate in the program by contacting Jason Schmidt, Urban Watershed Specialist at the Long Tom Watershed Council at 541-338-7042 or jschmidt@longtom.org 💧

Long Tom Watershed Council uses live fish traps to assess distribution and seasonal migration of native cutthroat trout. In winter 2013, two trout were found in a trap west of Junction City. Amazon Creek's water quality has a direct impact on these downstream fish populations.



Stormwater Connections is published by the City of Eugene Public Works Department to enhance awareness of stormwater and related surface water management issues.

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541-682-2739



Hi folks! I'm Lily, the Pacific chorus frog, and I help the City of Eugene teach people about stormwater in our community.

Turtles raise families in the pond where I live. It is important not to disturb them because they are very sensitive and don't like to be handled. If you see one, you can enjoy watching them but do not touch!



Western pond turtle adult (left) and babies (above).

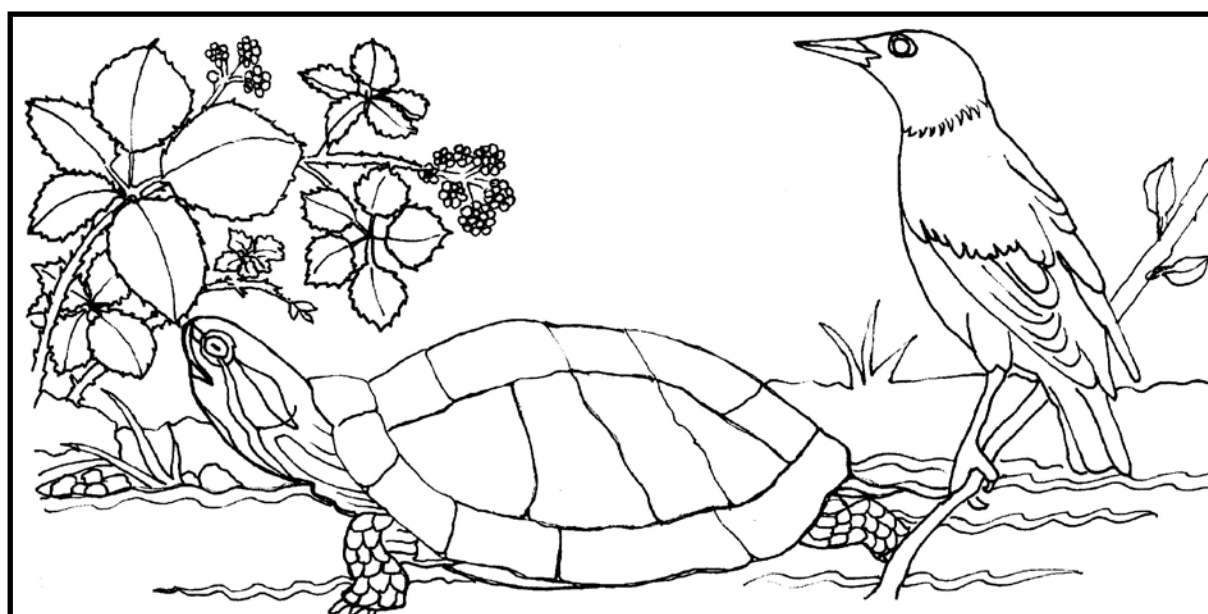
Turtle Talk

Have you ever seen turtles basking in the sunshine on a log in the middle of a pond? How closely did you look? Did the turtle have stripes or other markings? Around Eugene there are two types of turtles. One is from around here (native) and the other isn't (non-native). Our native turtle is the Western pond turtle. They have a dark brown shell and may have a cream colored throat or some light and dark blotches, but they are pretty plain. The other non-native turtle can be much more colorful. They often have yellow stripes on their head, neck, and legs and a red stripe behind their eye. These are called red-eared sliders!

If red-eared sliders are not from around here, how did they get here? They used to be people's pets. Sometimes people get tired of their pets and let them go in natural areas. This is not a good idea. Why? Because red-eared sliders carry diseases that can kill Western pond turtles. They also push smaller, gentler Western pond turtles off of logs and compete for other resources like food and places to nest. So if you have a turtle or other pet that you no longer want, please do not let it go in the wild! 💧



The markings on this turtle's head let us know it is a red-eared slider.



COLOR US!

Q: What do Himalayan blackberries, red-eared sliders and starlings have in common?

Answer at left

A: They are all non-native, invasive species that take food and habitat away from native species in our area.